Wind Energy

CENTRE FOR RENEWABLE & SUSTAINABLE ENERGY STUDIES

Stellenbosch UNIVERSITY IYUNIVESITHI UNIVERSITEIT

DATE 30 June - 4 July 2025

VENUE Engineering Faculty, Stellenbosch University

ACCREDITATION

Certificate of attendance (4 CPD points) REGISTER HERE

Certificate of competence (4 CPD points) REGISTER HERE

15 academic credits at NQF 8 or 9 level READ MORE

DEADLINE Certificate course registration closes 14 calendar days before the course starts.

The number of attendees is limited. Bookings will be taken on a first come, first served basis. For academic module registration deadlines, please contact the relevant academic programme coordinator.

science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

Eskom

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by: giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

sanedi
South African National Energy Development Institute

MAIN PRESENTER

Dr Gareth Erfort is the Senior Wind analyst for EDF Renewables South Africa. In this role he works on projects from inception to operation. He also currently holds a senior lecturer position at the Mechanical and Mechatronic Engineering department of Stellenbosch University. He completed his PhD thesis on in Vertical Axis Wind Turbines, utilising CFD and genetic algorithms.

COURSE COORDINATOR

Dr Willie Smit (Stellenbosch University) is a senior lecturer in the Department of Mechanical and Mechatronic Engineering. His fields of interest include robotics and drones. He and other students in the research group look at ways in which robots and drones can provide services to Concentrated Solar Power (CSP) plants.

Synopsis

This module deals with the harvesting of energy from wind and water. It addresses the availability of the resources, the types of systems and machines, their capabilities and limitations, the processes of setting up such systems, and their associated costs and environmental impacts. The main elements of the course are listed below:

- Wind power: Brief history, current state of industry and industry drivers.
- Predominant technologies, theory of operation, electromechanical and aerodynamic principles.
- Fundamentals of power quality and grid integration.
- Wind energy facility development process and methodologies, including wind resource assessment.
- Feasibility factors such as energy capture calculation, environmental impact assessment, grid studies and essential economics

Qualification and accreditation

The module is accredited for a variety of outcomes, depending on what the attendee registers for. Module contact time (40 hours) are shared by all attendees, but additional assessments, assignments, and projects will be specific to the outcome that the attendee registered for.

- The module is accredited for ECSA Continuous Professional Development (CPD) credits, and attendees can obtain a certificate of attendance (if all lectures have been attended) or competence (if all lectures have been attended and various assessments have been successfully passed).
- Unless otherwise stated, the module is also accredited for 15 academic credits at both NQF8 level (Post-graduate diploma) and NQF9 level (Masters), as part of various academic programmes. This requires a total time investment of 150 hours.

Delivery Model

- The module will be delivered over five days. Pre- and post-module assignments and projects are applicable depending on the outcome the attendee registered for.
- **Certificate of competence and academic attendees are required to attend the full module in person.** Certificate of attendance attendees have the option of attending the module in person, online only, or a mixture of these.

Who should attend

Engineers, technologists and technicians active in the energy sector. Government and local authority officials. Managers, planners and developers. Investors. Academic students.

Travel and Accommodation

All travel and accommodation arrangements are the attendee's own responsibility.

Prerequisites

Certificate of attendance: none
Certificate of competence / Post-graduate diploma at NQF8: NQF7 engineering qualification or equivalent
Masters at NQF9: NQF8 engineering qualification
IT infrastructure: For online attendees, adequate internet connectivity to connect reliably via Teams for the duration of the module. For Certificate of competence, Diploma and Masters attendees, a computer capable of running Windows 10 with user rights to install new software.

Module Fees

- The standard fee for the five-day module is **R14 200 for a certificate of attendance**, and **R19 100 for a certificate of competence**. Please refer to the University's latest study cost information for academic fees.
- From time to time funding is sourced to subsidise module fees for specific modules for attendees from specific areas of industry. Please refer to CRSES's short courses website for the latest information.
- Cancellations made up to 21 days before the module starts will be subject to a 15% handling fee. No refunds will be made after this date; however, substitutions will be accepted.
- Payment is mandatory for attendance.
- In the case of unforeseen circumstances, Stellenbosch University reserves the right to cancel the module or change the presenter/s, in which case all fees will be reimbursed in full on request.

Short courses:

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keziah@sun.ac.za
www.crses.sun.ac.za

Academic:

Please contact the relevant academic department, quoting course code 13185 744/844